

Abstract

To provide a CVD-based method for the relatively low temperature production of silicon nitride films and silicon oxynitride films that exhibit excellent film properties wherein said method is not accompanied by the production of ammonium chloride. Gaseous aminosilane such as tris(isopropylamino)silane and a gaseous hydrazine compound such as dimethylhydrazine are fed into a chemical vapor deposition reaction chamber that holds at least one substrate and silicon nitride film is formed on the substrate by reacting the two gases in said chemical vapor deposition reaction chamber.